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EXAMINER	
TO, BAOQUOC N	

ART UNIT	PAPER NUMBER
2162	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/925,125	SCHEURICH ET AL.	
	Examiner	Art Unit	
	BAOQUOC N. TO	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34,36,37,39-42,44-56,58-68,71,74 and 75* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-13, 17-34,36,37,39-42,44-56,58-68,71 and 75* is/are rejected.

7)☒ Claim(s) *14-16 and 74* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/10/2008 has been entered.

Claims 39, 44-47, 49, 51 and 71 are amended and claims 57 and 73 are canceled in the amendment filed on04/10/2008. Claims 1-34, 36-37, 39-42, 44-56, 58-68, 71 and 74-75 are pending in this application.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 36-37, 39, 71 and 74 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claims 36 and 39 are objected to under 37 CFR 1.75 as being a substantial duplicate of claim 1. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-13, 17-18, 22-34, 36-37, 39-40, 42, 44, 46-47, 49-56, 58, 60, 63-68, 71 and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lakshmi et al. (US. Patent No. 6,108,648) in view Bestgen et al. (US. Patent No. 6,754,652).

As to claim 1, Lakshmi teaches a method of automating a decision-making process related to an organization based on a collection of data reflecting a state of the organization, the method comprising:

selecting discrete coupleable items executable in a computer-implemented workflow environment, wherein the discrete coupleable items encapsulate work associated with activities identified by decomposing the decision-making process (col. 4, lines 39-45) said discrete coupleable items comprising:

executing said executable workflow to run said query against said collection of data, perform said analysis based on the results of said query, and distribute the results of said analysis to said one or more destinations (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5).

Lakshmi does not explicitly disclose a set of executable query directives, each executable query directive defining a query to be run against the collection of data; a set of executable analysis directives, each executable analysis directive defining an analysis to be performed based on results of a query; and a set of executable distribution directives; each executable distribution directive defining distribution of information based on an analysis to one or more destinations; and creating an executable workflow by coupling at least one of said executable query directives, at least one of said executable analysis directives, and at least one of said executable distribution directives. However, Bestgen discloses a set of executable query directives, each executable query directive defining a query to be run against the collection of data;

a set of executable analysis directives, each executable analysis directive defining an analysis to be performed based on results of a query; a set of executable distribution directives; each executable distribution directive defining distribution of information based on an analysis to one or more destinations; and creating an executable workflow by coupling at least one of said executable query directives, at least one of said executable analysis directives, and at least one of said executable distribution directives (from the perspective of intelligence, it will be appreciated that, in the context of query optimization, an optimizer framework consistent with the invention should provide for decision-making capabilities in a number of contexts, including: choosing general strategies to use in searching for a solution, and in what order; determining which query transformation (another way of viewing the search space) to consider and attempt for portion of a query (e.g., subgraphs or nodes of a query), in what order; determining which specific access methods to assign to sub graphs or nodes of a query; determining which of multiple completed access plans is superior; determining when to abandon a strategy as unfruitful; and determining when to complete an optimization (i.e., a completion criterion, or when a plan been found that is "good" enough") (col. 8, lines 52-67 to col. 9, lines 1-4). This suggests the decision making process based on the determining of directives to create an executable workflow for query optimization. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify teaching of Lakshmi to include the decision making process based on the determining of directives to create an executable workflow for query optimization as disclosed by Bestgen in order to allow the query to be optimized.

As to claim 2, Lakshmi teaches the method of claim 1 further comprising: scheduling the executable workflow for automatic execution (periodic training process 220) (col. 8, lines 33-36).

As to claim 3, Lakshmi teaches the method of claim 2 wherein scheduling comprises: specifying a condition as a state change in data of the data collection serving as input to the decision-making process (col. 5, lines 45-50); and responsive to determining the condition has occurred, automatically executing the workflow (periodic training process 220) (col. 8, lines 33-36).

As to claim 4, Lakshmi teaches the method of claim 1 further comprising: scheduling the executable workflow for automatic initiation upon detection of a specified state change in the collection of data (col. 8, lines 33-34).

As to claim 5, Lakshmi teaches the method of claim 1 wherein the executable workflow comprises at least one template having unbound values (values) (col. 5, lines 49-52)

As to claim 6, Lakshmi teaches the method of claim 1 wherein the executable workflow comprises at least one conditional branch (col. 4, lines 65-67).

As to claim 7, Lakshmi teaches the method of claim 1 wherein the executable workflow comprises at least one gate (state) (col. 5, lines 49-52).

As to claim 8, Lakshmi teaches the method of claim 1 wherein the executable workflow is sharable among a plurality of users (prompt user to choose…) (col. 7, lines 39-41).

As to claim 9, Lakshmi teaches the method of claim 1 wherein the collection of data comprises a data warehouse (data tables 120) (col. 4, line 39).

As to claim 10, Lakshmi teaches the method of claim 9 wherein the data warehouse comprises databases having disparate schema (database table 120) (col. 4, line 39)

As to claim 11, Lakshmi teaches the method of claim 1 further comprising: executing the executable workflow (periodic training process 220) (col. 8, lines 33-36)

As to claim 12, Lakshmi teaches the method of claim 11 further comprising: tracking workflow execution duration time (this process iteratively performed until the difference value falls below a predetermined threshold, or until the neural network 140 has been trained beyond a specified number of iterations) (col. 5, lines 13-16).

As to claim 13, Lakshmi teaches the method of claim 11 further comprising: during execution of the executable workflow, responsive to detecting a plurality of inputs to an item within the workflow, instantiating multiple instances of the item for accepting the inputs (the process 220 prompts the user to choose the particular database, table, column, UDR and associated parameters) (col. 7, lines 39-41).

As to claim 14, Lakshmi teaches the method of claim 1 further comprising: specifying a condition to trigger automatic initiation of execution of the executable workflow in the computer environment (subsequent training may be started after the database has been updated heavily) (col. 7, lines 34-35).

As to claim 18, Lakshmi teaches the method of claim 1 wherein at least one of the destinations represents a decision-maker (the neural network can be adapted to generate additional estimates for guiding the optimizer in making its decision) (col. 12, lines 50-52).

As to claim 22, Lakshmi teaches the method of claim 1 wherein at least one of the destinations is associated with database (database table 120 and 122) (col. 4, lines 39-40).

As to claim 23, Lakshmi teaches the method of claim 1 wherein at least one of the items defines a presentation event to a decision-maker (col. 12, lines 50-52).

As to claim 24, Lakshmi teaches the method of claim 23 further comprising: tracking a decision-maker's reaction to the presentation event (col. 12, lines 50-52)

As to claim 25, Lakshmi teaches the method of claim 1 wherein the executable workflow comprises a meta sequence (query execution sequence) (col. 5, lines 1-10).

As to claim 26, Lakshmi teaches the method of claim 1 further comprising: persisting the interim state of the workflow (col. 12, lines 39-52); and providing access to the interim state of the workflow to a decision-maker (col. 12, lines 39-52).

As to claim 27, Lakshmi discloses the method of claim 26 wherein providing access comprises providing a hyperlink to the interim state of the workflow (links) (col. 5, line 63).

As to claim 28, Lakshmi teaches the method of claim 1 wherein the executable workflow distributes a link to interim processing performed during execution of the workflow (links) (col. 5, line 63).

As to claim 29, Lakshmi teaches the method of claim 1 wherein the executable workflow performs closed-loop processing without further user input (the process 220 prompt the user to choose the particular database…) (col. 7, lines 39-41).

As to claim 30, Lakshmi teaches the method of claim 1 wherein the executable workflow reflects best practices of the organization (optimum execution plan for queries) (col. 4, lines 47-49)

As to claim 31, Lakshmi teaches the method of claim 1 wherein the executable workflow reflects best practices of the organization as determined by repeated execution and refinement of the workflow (subsequent training may be started after the database has been update heavily) (col. 7, lines 24-35).

As to claim 32, Lakshmi teaches the method of claim 1 wherein the executable workflow distributes information based on stored user permissions (the process 220 prompt the user to choose the particular database…) (col. 7, lines 39-41).

As to claim 33, Lakshmi teaches the method of claim 1 wherein the executable workflow selectively distributes exceptions when detected in the collection of data (the generated queries are executed by a query executor 135. The result generated by

executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5).

As to claim 34, Lakshmi teaches the method of claim 1 further comprising: publishing the executable workflow to a plurality of users of the computer environment (the user can view available tables…) (col. 7, lines 53-45).

As to claim 36, Lakshmi teach a computer-implemented method of generating and distributing information based on a collection of data, the method comprising:

creating an executable sequence of associated discrete items executable in a computer environment, wherein at least one of the associated discrete items defines a query to be run against the collection of data, and at least one of the associated discrete items defines a distribution directive operable to distribute information based on the query to at least one destination (optimum execution plan for queries) (col. 4, lines 47-49); and

scheduling the executable sequence for automatic execution in the computer environment, wherein at least one of the associated discrete items is denoted as coupled to another of the associated discrete items (periodic training process 220) (col. 8, lines 33-36); and

executing said executable sequence to run said query against said collection of data, and distribute the information based upon the results of said query to said at least one destination (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5).

As to claim 75, Lakshmi teaches the method of claim 36 wherein the at least one associated discrete item defining a query is stored and is operable to periodically query the collection of data according to the stored query to generate one or more result sets; wherein at least one associated discrete item defines a stored analysis directive operable to analyze the result sets according to the stored analysis directive to generate one or more refined result sets; and wherein the at least one associated discrete item defining a distribution directive is stored and is operable to forward information based on the refined result sets according to the stored distribution directive (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5)

Claim 37 recites computer readable medium to perform the steps similar to claim 36, Lakshmi discloses “each computer program is preferably stored on a stored medium or device....” (col. 13, lines 3-13).

As to claim 39, Lakshmi discloses a computer-implemented method of defining query-based processing to be performed for a collection of data, the method comprising:

associating the processing directives into an executable sequence operable to generate and distribute information from the collection of data when executed, wherein at least a first of the processing directives is denoted as coupled to at least a second one of the processing directives, and at least one of the processing directives is operable to accept input from another processing directive denoted as coupled thereto and distribute information to one or more destinations based on the input from the other processing directive (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5); and

executing said executable sequence to run said query against said collection of data, generate information from said collection of data, and distribute said information to said one or more destinations (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5).

Lakshmi does not explicitly disclose selecting a plurality of coupled processing directives, wherein at least one of the processing directives is a query processing

directives, at least one of the processing directives is an analysis processing directive, and at least one of the processing directive is a distribution processing directive; however, Bestgen discloses selecting a plurality of coupled processing directives, wherein at least one of the processing directives is a query processing directives, at least one of the processing directives is an analysis processing directive, and at least one of the processing directive is a distribution processing directive (another way of viewing the search space) to consider and attempt for portion of a query (e.g., subgraphs or nodes of a query), in what order; determining which specific access methods to assign to sub graphs or nodes of a query; determining which of multiple completed access plans is superior; determining when to abandon a strategy as unfruitful; and determining when to complete an optimization (i.e., a completion criterion, or when a plan been found that is "good" enough") (col. 8, lines 52-67 to col. 9, lines 1-4). This suggests the decision making process based on the determining of directives to create an executable workflow for query optimization. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify teaching of Lakshmi to include the decision making process based on the determining of directives to create an executable workflow for query optimization as disclosed by Bestgen in order to allow the query to be optimized.

As to claim 40, Lakshmi teaches the method of claim 39 further comprising: scheduling the executable sequence for automatic periodic execution (periodic training process 220…) (col. 8, lines 33-34).

As to claim 42, Lakshmi teaches method of claim 39 further comprising:

during execution of the executable sequence, as a result of processing the first processing directive, generating a result set; and during execution of the executable sequence, coupling the second processing directive to the first processing directive by providing an identifier identifying the result set (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5).

As to claim 44, Lakshmi teaches the method claim 39 further comprising: scheduling the processing directives for periodic execution to provide notifications of data exceptions in the data collection to at least one of the destinations (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5)

As to claim 46, Lakshmi teaches the method of claim 39 further comprising: scheduling the processing directives for periodic execution to automatically order additional inventory responsive to detecting a shortage (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5).

As to claim 47, Lakshmi teaches the method of claim 39 wherein the processing directive operable to distribute information is configurable to distribute information to a

variety of destination types (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5).

As to claim 49, Lakshmi teaches the method of claim 39 wherein at least one of the destinations is associated with a user; and distribution of at least some of the information directed to the processing directive operable to distribute information is blocked based on stored permissions of the user (only allowable value will be kept after the training of the execution) (col. 5, lines 45-53).

As to claim 50, Lakshmi teaches he method of claim 49 wherein at least one of the destinations is associated with another user; and access to the blocked information is permitted for the other user based on stored permissions of the other user (only allowable value will be kept after the training of the execution) (col. 5, lines 45-53).

As to claim 51, Lakshmi teaches the method of claim 39 wherein the sequence produces interim results, the method further comprising: storing the interim results; and distributing to at least one of the destinations a link by which the interim results can be accessed (links) (col. 5, lines 54-66).

As to claim 52, Lakshmi teaches the method of claim 51 further comprising: blocking access to at least a portion of the interim results by a user based on stored permissions for the user (only allowable value will be kept after the training of the execution) (col. 5, lines 45-53).

As to claim 53, Lakshmi teaches the method of claim 39 further comprising: responsive to the associating, when executing the sequence, coupling output of the first processing directive to input of the second processing directives (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5).

As to claim 54, Lakshmi teaches the method of claim 39 wherein at least one of the processing directives is operable to select one out of at least two possible next processing directives denoted as coupled thereto during execution to selectively direct execution flow (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5).

As to claim 55, Lakshmi teaches the method of claim 39 wherein at least one of the processing directives is operable to filter out information not meeting specified criteria (query execution filter out unwanted data) (col. 3, lines 25-30).

As to claim 56, Lakshmi teaches the method of claim 39 wherein at least one of the processing directives is operable to filter out information not appearing in a top records according to a specified sorting criteria (query execution filter out unwanted data) (col. 3, lines 25-30).

As to claim 58, Lakshmi teaches the method of claim 57 wherein at least one query processing directive and at least one analysis processing directive generate results in a same format, and the analysis processing directive and at least one distribution processing directive accept results in the same format (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5).

As to claim 60, Lakshmi teaches the method of claim 39 further comprising: when executing the sequence, storing a result set accessible to and of a format processable by the second processing directive to couple the output of the first processing directive to the input of the second processing directive (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5).

As to claim 63, Lakshmi discloses the method of claim 60 wherein the result set is accessible to the second processing directive via an identifier identifying the result set (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5).

As to claim 64, Lakshmi teaches the method of claim 39 wherein at least one of the processing directives is sharable among a plurality of users (the user can view…) (col. 7, lines 43-46).

As to claim 65, Lakshmi teaches the method of claim 39 wherein at least one of the processing directives is included in another executable sequence (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5).

As to claim 66, Lakshmi teaches the method of claim 65 further comprising: accepting user edits to the processing directive to modify execution of more than one sequence (prompt the user to choose…) (col. 7, lines 43-46).

As to claim 67, Lakshmi teaches the method of claim 39 further comprising: publishing the executable sequence to a plurality of users (the user can view…) (col. 7, lines 43-46).

As to claim 68, Lakshmi teaches the method of claim 67 further comprising: accepting user edits to the published executable sequence (prompt the user to choose…) (col. 7, lines 43-46); and saving the edited published executable sequence as a separate executable sequence (the user can view…) (col. 7, lines 43-46).

As to claim 71, Lakshmi teaches a computer-implemented system for defining query-based processing to be performed for a collection of data via specification of a sequence of loosely-coupled processing directives, the system comprising:

a sequence execution coordinator for coordinating execution of the sequence and coupling the processing directives during execution of the sequence (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5); and

delivery coordinator for distributing results produced by the execution of the sequence to said one or more destinations (the generated queries are executed by a query executor 135. The result generated by executor 35 is divided into a training data set and a validation data set. The training data set from the executor 135 is provided to a feature vector generator 138) (col. 5, lines 1-5).

Lakshmi does not explicitly discloses a sequence definer for accepting a set of loosely-coupled processing directives, wherein at least one of the processing directives is a query, at least one of the processing directives is an analysis directive and wherein at least one of said processing directives is an distribution directive; however, Bestgen discloses a sequence definer for accepting a set of loosely-coupled processing directives, wherein at least one of the processing directives is a query, at least one of the processing directives is an analysis directive and wherein at least one of said processing directives is an distribution directive (from the perspective of intelligence, it will be appreciated that, in the context of query optimization, an optimizer framework consistent with the invention should provide for decision-making capabilities in a number of contexts, including: choosing general strategies to use in searching for a

solution, and in what order; determining which query transformation (another way of viewing the search space) to consider and attempt for portion of a query (e.g., subgraphs or nodes of a query), in what order; determining which specific access methods to assign to sub graphs or nodes of a query; determining which of multiple completed access plans is superior; determining when to abandon a strategy as unfruitful; and determining when to complete an optimization (i.e., a completion criterion, or when a plan been found that is "good" enough") (col. 8, lines 52-67 to col. 9, lines 1-4). This suggests the decision making process based on the determining of directives to create an executable workflow for query optimization. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify teaching of Lakshmi to include the decision making process based on the determining of directives to create an executable workflow for query optimization as disclosed by Bestgen in order to allow the query to be optimized.

5. Claims 19-21, 41, 45, 48, 59 and 61-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lakshmi et al. (US. Patent No. 6,108,648) in view of Lipkin (US. Patent No. 6,721,747 B2).

As to claim 41, Lakshmi teaches the method of claim 39 excepting for wherein the processing directives are processed by processing directive coordinators, at least one of which is operable to provide results in markup language and at least one of which is operable to process results in markup language as input. Lipkin teaches wherein the processing directives are processed by processing directive coordinators,

at least one of which is operable to provide results in markup language and at least one of which is operable to process results in markup language as input This suggests the use of XML applicant to store results. Therefore, it would have been obvious to one ordinary skill in the art could have modify Lakshmi to include the XML language to store the result as disclosed in Lipkin to allow the data to be access over the web browser.

As to claim 59, Lakshmi teaches the method of claim 58 excepting for wherein the format is XML; however, Lipkin discloses wherein the format is XML (col. 140, lines 12-18). This suggests the use of XML applicant to store results. Therefore, it would have been obvious to one ordinary skill in the art could have modify Lakshmi to include the XML language to store the result as disclosed in Lipkin to allow the data to be access over the web browser.

As to claims 61-62, Lakshmi teaches the method of claim 60 excepting for wherein the result set is of a markup language format; however, Lipkin discloses wherein the result set is of a markup language format (col. 140, lines 12-18). This suggests the use of XML applicant to store results. Therefore, it would have been obvious to one ordinary skill in the art could have modify Lakshmi to include the XML language to store the result as disclosed in Lipkin to allow the data to be access over the web browser.

As to claim 45, Lakshmi teaches the method of claim 39 excepting wherein the processing directive operable to distribute information is operable to distribute information to a web site, the method further comprising: scheduling the processing directives for periodic execution to update the web site; however, Lipkin teaches wherein the processing directive operable to distribute information is operable to distribute information to a web site, the method further comprising: scheduling the processing directives for periodic execution to update the web site (col. 140, lines 12-18). This suggests by storing results in XML, which would update the web site. Therefore, it would have been obvious to one ordinary skill in the art could have modify Lakshmi to include the XML language to store the result as disclosed in Lipkin to allow the data to be access over the web browser.

As to claims 19 and 48, Lakshmi teaches the method of claim 1 excepting wherein at least one of the destinations is associated with a wireless device; however, Lipkin discloses wherein at least one of the destinations is associated with a wireless device (col. 140, lines 12-18). This suggests notifying to the web browser, which will accessible to by any device including a wireless device. Therefore, it would have been obvious to one ordinary skill in the art could have modify Lakshmi to include notifying by using the web browser which accessible by a wireless device as disclosed in Lipkin to allow the data to be access over the web browser.

As to claim 20, Lakshmi teaches the method of claim 1 excepting wherein at least one of the destinations is an email address; however, Lipkin discloses wherein at least one of the destinations is an email address (col. 140, lines 12-18). This suggests notifying to the web browser, which include the email. Therefore, it would have been obvious to one ordinary skill in the art could have modify Lakshmi to include notifying by using the web browser which include the email as disclosed in Lipkin to allow the data to be access over the web browser.

As to claim 21, Lakshmi teaches the method of claim 1 excepting for wherein at least one of the destinations is associated with web page. However, Lipkin discloses wherein at least one of the destinations is associated with web page (col. 140, lines 12-18). This suggests destination to the web page. Therefore, it would have been obvious to one ordinary skill in the art could have modify Lakshmi to include destination to the web page disclosed in Lipkin to allow the data to be access over the web browser.

Allowable Subject Matter

6. Claims 14-16 and 74 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is at 571-272-4041, or unofficial fax number for the purpose of discussion (571) 273-4041 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached at 571-272-4107.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231.

The fax numbers for the organization where this application or proceeding is assigned are as follow:

(571) 273-8300 [Official Communication]

/Baoquoc N To/

Primary Examiner, Art Unit 2162

May 10th, 2008